



United States Department of the Interior

GEOLOGICAL SURVEY

Cruise Report

Cruise Report 84-1

Dates: 16-20 January 1984

Objectives: Vibracore the Escollo de Arenas in Vieques, Puerto Rico.

Vessel: R/V Jean A.

Personnel: Rafael W. Rodriguez - USGS/Chief Scientist
Juan L. Trias - USGS
Carlos Goenaga - USGS
Jose Muniz - DNR/USGS
Richard Webb - DNR
Noemi Gonzalez - USGS

Equipment: Vibracore apparatus consisting of hydraulic pump, jackhammer; 8m long. 6cm diameter aluminum tubes. Scuba gear.

| Schedule: | <u>January</u> | <u>Time</u> | <u>Place</u> |
|-----------|-----------------|-------------|--------------|
| | Monday, 16th | 1200 | Fajardo |
| | Monday, 16th | 1200-1700 | Escollo |
| | Tuesday, 17th | 0600-1700 | Escollo |
| | Wednesday, 18th | 0600-1700 | Escollo |
| | Thursday, 19th | 0600-1700 | Escollo |
| | Friday, 20th | 0600-1200 | Escollo |
| | Friday, 20th | 1200-1500 | Fajardo |

Total of 5 boat days

Total of Man-days at sea USGS-25

Results & Comments: The sudden availability of the JEAN A altered our original plans of leasing a small boat to do vibracoring on the sand deposit. The sea state was lousy (2-3m swells, 1-2m seas and winds of 15-20 knots). "Spring" tides substantially increased the velocity of tidal currents ("normal" tidal current velocities often exceed 150 cm/sec or about 3 knots). Vibracoring was not possible during maximum flood or ebb and even during slack water, divers often worked tied to anchors.

About a dozen cores were obtained from the shoal and nearby areas. The cores will be opened and analyzed this week. The information they generate will help our evaluation of the Escollo as a sand resource for Puerto Rico.

Copies:

Dillon; Aldrich; Knebel; Winget; Cardona